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ON

THE TREATMENT

OF THE



MORE PROTRACTED CASES

OF

INDIGESTION.

BY

A. P. W. PHILIP, M.D., F.R.S. L.&E.

BEING

AN APPENDIX TO HIS TREATISE ON
INDIGESTION.

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CONTENTS.

	Page
OF the Treatment, &c.	1
Of the Examination by Pressure on the Regions of the Stomach and first Intestine	9
Of the state of the Organs of Waste in Indigestion	28
Of the Principles of the medicinal Treatment in the more protracted Cases of Indigestion . . .	47
Of the Nitrate of Potash	57
Of Tartarized Antimony	64
Of Ammonia	70
Of the Influence of Habitual Indigestion on other Diseases.	75

ON THE TREATMENT, &c.

CONSIDERABLE additions were made to my Treatise on Indigestion in the second edition ; but at the time the last three editions were published, other avocations prevented my making the additions which had occurred to me, and they are now so considerable, that I think it would not be fair towards the great number of people who possess the Treatise, to make them in the ensuing edition. I have therefore resolved to give them in the form of an Appendix, which may be purchased separately, and to make no addition to the Treatise itself.

I think it right to observe here, that since the last edition of my Treatise was published, two highly respectable physicians, in

works* embracing many of the same topics, have made observations on it, to which I conceive it equally due to the public and myself, that some reply should be made; and I shall here take an opportunity of replying to these gentlemen in a few words before I enter on the proper subject of this Appendix.

That a book may be very useful without containing any thing new, all will admit. A greater number of facts may be brought together, or their arrangement may be better than in any former work on the subject; or the subject may be discussed in a more amusing way, or in one more likely to impress it on the memory. My Treatise on Indigestion was not offered to the public for these or any similar reasons; but because I was persuaded that the observations I had made, and the investigations in which I had been engaged, had enabled me to suggest an improved plan of treatment in the more advanced forms of what I have called Indiges-

* *A Treatise on Diet, &c.*, by Dr. Paris; and *An Essay on Morbid Sensibility of the Stomach and Bowels, &c.*, by Dr. James Johnson.

tion. The gentlemen to whom I have just referred, maintain that in this persuasion I have been deceived, and that my distinctions, and consequently the advantages of the treatment founded on them, are imaginary.

Had these assertions been made at an earlier period, I could have said nothing in reply, but that I had observed the phenomena of the disease with care, and had often witnessed the good effects of the plans of treatment recommended, before I proposed them to the public; and that means, which are at all events safe, are at least worthy of a trial under circumstances in which we have often been compelled to make a trial of those, of which this cannot be said. At present, however, I have the testimony of physicians and others of our profession, in parts of the kingdom the most distant from each other, in favour of the efficacy of these means, and consequently, I conceive, of the accuracy of the observations which led to them.

That at some period of indigestion the complaint, from having been a mere nervous

affection, assumes an inflammatory character; that this tendency is the source of all the mischief which we sometimes observe in protracted cases; that the usual means do not relieve this state, but that it yields, in most cases, to very gentle means of a different description, are facts which, when once pointed out, I believe all who have frequent opportunities of treating the disease, who view its phenomena with accuracy, and have sufficient command of themselves to prevent the interference of preconceived opinions, cannot fail to observe; and in this opinion I am now supported by men of the greatest experience in our profession. It must therefore appear to me, that writers who do what in them lies to recall the former principles of treatment, as far as they have been superseded by what I believe to be more correct views, tend to do harm; and on this account, as well as in my own defence, I have thought it proper thus to state what I consider a sufficient reply to their observations.

Dr. Paris, indeed, replies to himself; for he has been betrayed into contradiction in

the most essential part of his subject. In the 240th and 241st pages of his Treatise he does me the honour to say, “ I consider the train
“ of reasoning by which Dr. Philip establishes
“ the important fact, that long-continued ir-
“ ritation at length terminates in inflamma-
“ tion and organic derangement of the part
“ affected, as constituting a very valuable
“ part of his work.” Yet, when I say that irritation of the digestive organs, surely inferior to no other, produces in its progress inflammatory tendency, and at length organic disease; and consequently that Indigestion naturally divides itself into three stages, the stage of simple irritation, that of inflammatory tendency, and that of organic disease, he observes, in the 234th page, “ The arrangement is wholly artificial. Nature
“ does not acknowledge it, nor will she
“ submit to it” ! The only thing difficult to account for is, that the disease should not sooner have been so divided.

I must be excused for adding, that it is the respectability of the foregoing gentlemen alone which has induced me to reply to them; for I find nothing in their works but opinions brought in opposition to the facts

I adduce ; and as I have neither time nor inclination for controversy, I shall not in future be easily induced to reply to any similar observations. I willingly leave the doctrines in question to their fate. If they are founded on correct observation, the remarks, neither of these nor any other writers, will prevent their reception by the public. If they are not, it is not my wish that they should be received.

It has always been my aim to observe the phenomena of disease with a mind as little biassed as possible, a maxim I would strongly recommend to the attention of both the gentlemen in question ; persuaded that, had they more strictly observed it, the censure they have bestowed on me would have been less severe.

Either from some obscurity in my style or want of care on their part, I have made myself very imperfectly understood by either of them in what I have said of the nature of Indigestion.

Dr. Paris, indeed, has wholly misunderstood even the meaning I attach to the term Indigestion, which, if he will take the trouble to recur to my Treatise, he will find I consider a disease, not of any one set of organs, but of the whole system ; and, in the 3d, 4th, and

5th pages, I take great pains clearly to place this meaning before the reader. I would also take the liberty of referring Dr. Paris to a more careful perusal of my Treatise respecting several other topics, particularly the subject of dyspeptic phthisis; for I can hardly believe that Dr. Paris will deny that consumption is sometimes caused by long-continued disorder of the digestive organs. He will find that consumption, so caused, is what I call dyspeptic phthisis. How he explains the operation of this cause, he will perhaps on reflection admit, is comparatively unimportant.

If Dr. Johnson will be so good as to recur to my Treatise, he will find that I never, as he supposes, regarded tenderness in the region of the stomach as indicating organic disease either of it or of the liver; and that these are only two of many instances in which he has misconceived me.

THE following pages contain observations, in addition to what is said in my Treatise on Indigestion, on those parts of the subject which are of most importance in the more advanced stages of the disease. I shall divide what I am about to say into short dissertations, arranged in such a way as to preserve

the connexion of the whole, on the different points to which I conceive the attention of the practitioner ought chiefly to be directed. The great object here, as with respect to every other disease, is to arrive at general principles, without which our practice must always be vague; for every constitution having its peculiarities, it is often of little consequence to know what has been of use in particular instances. Thus it is that rules of practice, which lead to no determinate principles, are generally of little value. After all that can be said, the practitioner still feels himself at a loss in attempting to apply them. It is a knowledge of these principles alone which constitutes the difference between the rational practitioner and mere empiric.

Of the Examination by Pressure on the Regions of the Stomach and first Intestine.

I SHALL begin the addition I am about to make to my Treatise on Indigestion, with some observations on a subject, of the importance of which, in the treatment of this disease, I have every year been more sensible, the examination by pressure of the regions of the pylorus and duodenum, or first intes

tine. The part of this intestine, whose examination is of most importance, lies several inches lower than the pylorus, but about the same distance towards the right side from the centre of the body. It is of consequence to make the examination in the erect position. When the patient lies on the back, the viscera fall from the hand, and it is impossible to judge of their state with the same accuracy.

While the region of the pylorus is always tender on pressure in the second stage of Indigestion, that of the duodenum is only occasionally so; but the latter is often affected in other ways, an attention to which is of great consequence in conducting the treatment in protracted cases. Pressure on the part of the duodenum just pointed out, in such cases, at the same time that it occasions tenderness, or when it has no degree of this effect, almost always occasions a greater sense of oppression, and more affects the state of the breathing, than pressure on the left side. If the pressure be made on the corresponding places, and with the same degree of force on both sides, the patient will

almost always tell you that the left side feels more free than the right, and that there is something in the latter which gives him a sense of obstruction. A difference also is always evident to the hand of a person who has been at all in the habit of making this examination. The right side feels fuller and firmer; and if he tries to press the fingers under the ribs in the two sides, he will feel a sensible difference in the ease with which this is done.

It is natural to suppose that, as the liver lies on the right side, these differences may be ascribed to it. On this account I have, both alone and with other physicians, examined in this way healthy people, without the slightest difference between the sides being detected. In a healthy subject the liver lies wholly under the ribs, and on both sides below the ribs we press on nothing but the soft bowels; and when the fingers are pushed up under the ribs, the healthy liver lies too much out of reach, and yields too easily to admit of our perceiving it through the integuments of the abdomen. I am the more particular here, because I find that even

medical men have sometimes been deceived in these respects. They can, however, readily satisfy themselves by an examination of the healthy subject, which some have done in my presence, and had the candour to allow that they had not sufficiently adverted to the circumstances just mentioned. The truth is, the attention has never been particularly directed to the subject, and it has not, therefore, obtained the attention it will be found to deserve.

Where any decided difference can be perceived between the two sides examined in the ways just pointed out, it is always the effect of disease. The sense of oppression which arises from pressure on the region of the duodenum evidently depends on this intestine not freely discharging its contents, for the distention perceived by the hand is in the seat of that intestine, and in recent cases may for the time be removed by a brisk dose of calomel. A hand accustomed to make the examination can at once determine to what extent the intestine is distended.

I have of late years regarded the degree of this distention as the best measure of the

degree in which the digestive organs are deranged, and it has seldom deceived me. The patient's sufferings are proportioned to the irritability of his nerves, as well as to the degree of his complaint, and therefore are not a correct measure of its degree. When the region of the pylorus is tender, we know that the second stage has commenced; that a general inflammatory tendency, greater or less in proportion to that tenderness, prevails in the system, the removal of which is necessary to recovery. When this tenderness has extended to the region of the duodenum, we know that the affection of the pylorus has extended to it; but this is not merely proportioned to the degree in which the digestive organs are deranged, but to that and the degree of inflammatory tendency in the particular constitution. The difficulty with which the duodenum empties itself, on the other hand, very accurately tells us the degree of languor which prevails in the digestive organs, which, compared with the other circumstances of the case, more or less regulates all our means; and so constant a symptom of protracted indigestion is morbid distention

of the duodenum, that, without saying a single word to the patient, the physician may generally know, by laying his hand on the region of this intestine, even on the outside of the clothes, whether the case be recent or not.*

As soon as the weakness of the stomach has spread to the liver, a bile of less active properties begins to be secreted, and in the same proportion the action of the first intestine, where the aliment is mixed with this fluid,† begins to languish, and dyspeptics,

* Here let me correct an error, which some who have carelessly perused my Treatise have fallen into. If they will take the trouble to recur to it, they will find that I never said that the tenderness of the pylorus is of a serious nature, or apt to run into organic disease; but, on the contrary, pointed out that it is in the common course of common stomach complaints, and very rarely, if ever, leads to anything like organic disease of that part; diseased structure in Indigestion almost always occurring in parts at a distance from the stomach, as is pointed out at length in my Treatise on Indigestion. When other fatal diseases give us an opportunity of examining the pylorus in the second stage of the disease, as I have often witnessed, it is found redder than usual; but even where, from long continued irritation, I have found its surface abraded, I have never seen anything like organic disease in it in common cases of Indigestion.

† The importance of the due performance of this process strikingly appears, from the well-known experiments of Mr. Brodie.

often for months or even years, have constantly an accumulation in this intestine of what ought to be discharged. Not that the same contents remain, for a continual passage through the bowels is of course necessary to life ; but the duodenum never emptying itself thoroughly, a great portion of aliment is retained there beyond the due time, and is not evacuated till a fresh supply from the stomach has laid the foundation for other accumulations, and thus an enlargement, evident to the eye as well as the hand, often takes place ; and the patients themselves, particularly women, from the nature of their dress, not unfrequently perceive the body sensibly, and often to a considerable degree, enlarged.

Children are still more inclined to this accumulation than adults, most of their complaints being connected with the state of the digestive organs. Of children who are out of health, with the exception of those labouring under contagious diseases, not one in twenty will be found free from more or less of it, and their restoration to health is never permanent till the due action of the first intestine is restored.

When the duodenum is habitually loaded, no ordinary cathartic will relieve it. It passes through it, leaving the greater part of its contents behind. I have just had occasion to remark that, in the more recent cases, it may generally be emptied by a brisk dose of calomel; but the accumulation soon forms again, and is only to be permanently prevented and the patient restored to health by such means as produce a bile of healthy properties. When this is effected, the duodenum, without any sensible effect of the means employed, empties itself regularly, and in nineteen cases out of twenty, the symptoms which had so long harassed the patient then disappear, one among other proofs that the load on the delicate nerves of this bowel is the chief source of such symptoms.

Another observation made by examination of the region of the stomach, of great consequence both in judging of the state of the disease and regulating its treatment, is that the tenderness, although in a comparatively small number of cases, is sometimes found to extend across that region, and, in some instances, even to be greatest on the left

side. I do not speak of the pain ; it is usual in the most common bilious attacks, and indeed in all cases of indigestion, for a pain to be felt in the left side, but without any tenderness on pressure in its seat. This pain, which I shall presently have occasion to mention more particularly, is generally to be classed with the other sympathetic pains of the disease, whose seat is various and of little consequence. But the case is very different when the tenderness has extended across the region of the stomach, or is confined to the left part of it, of which, as of its existence when confined to its more common seat, the patient is never aware till accident or the physician points it out.

Of a great number of such cases, I cannot recollect one which did not prove obstinate, unless the tenderness was only of a temporary nature, disappearing at most in a few days. The alterative plans, which are generally so effectual in the more usual form of the disease, are here of little avail, if we except the more direct means of relieving the inflammatory tendency. Mercurials have often appeared to me nearly useless,

and if carried beyond the mildest doses, always prejudicial. To what we are to ascribe the tenderness in such cases, is a question of great importance in their treatment. I shall here state what I have been able to collect from my observations on this subject.

I have no doubt, both from the course the disease has taken in various instances, and from the result of dissections, that the extension of the tenderness towards the left side, or its original seat in that side, in different cases depends on different causes, all of which are more unfavourable than the circumstances which cause its existence in the region of the pylorus and duodenum. When it arises from an affection of the spleen, it is generally easily distinguished by the enlargement of this viscus. The same may be said of the enlargement of the left lobe of the liver, which is always the part of this organ most affected in Indigestion, for a reason explained in my Treatise on that disease. When it happens, it is generally in those who have suffered from sultry climates, or the use of intoxicating liquors ; but pretty

extensive observation has convinced me, that neither of these is the most common cause of the symptom we are considering.

I believe one of its most common causes, and perhaps its most favourable cause when it proves permanent, is the state of the pylorus extending to other parts of the stomach. It is not uncommon in dissection to find many parts of the surface of the stomach redder than they ought to be, in short, pretty much in the same state in which the pylorus is more frequently found.

Sometimes, though fortunately very rarely, there is a tendency to organic disease in the great end of the stomach, which I have seen much thickened and indurated. When this happens, the hardness may be felt externally. But it requires a good deal of caution to ascertain its seat. It may, even by the most experienced, be mistaken for the left lobe of the liver in a diseased state, and extending to the left side. The best means of distinguishing these affections, is finding that the hand sinks into the soft parts between the tumour and the seat of the liver.

It is still more difficult to distinguish it

from affections of the part of the colon which lies nearest this part of the stomach. I have had reason in many cases to think that the extension of the tenderness across the epigastric region has arisen from an affection of this bowel.

The best means of distinguishing affections of the stomach from those of the colon are, the digestive process in the latter cases being better performed, the state of the bile less disordered, the patient not experiencing the increase of uneasiness which often comes on after meals for a considerable time after eating, and often experiencing more or less pain, or some other uneasiness, in the region of the stomach a short time before the bowels are moved, and more or less relief soon after their action. The general health also suffers less in proportion to the severity of the symptoms than when the stomach is affected.

These observations, however, apply chiefly to the slighter affections of the higher part of the colon, or the early stages of its more severe diseases. In their more advanced stages, the stomach, and other digestive organs, either by actual participation of the

disease or by sympathy, suffer so much, that the diagnosis becomes much more difficult. As the disease, however, while it increases in severity, generally at the same time becomes more extensive, its seat may often be ascertained by tracing it to a considerable distance in the course of the colon.

The pain of the left side, in what are called bilious complaints, in many cases evidently arises from an affection of this bowel where it turns downwards on that side, being immediately relieved by the discharge of its contents. We have reason to believe, however, that this is not its most common cause, and that, as I have just had occasion to observe, it is generally to be classed with the sympathetic pains of indigestion. Although, as remarked above, it is not necessarily connected with any tenderness of the part; it is often accompanied with tenderness of the ribs and intercostal muscles of the left side, and is then sometimes connected with this tenderness, which is an external sympathetic affection of the same nature with the tenderness of the cartilage near the pylorus, the cause of which I have had occasion to con-

sider in my Treatise, only occurring at a greater distance from the source of irritation.

With regard to the nature of the affections of the colon, which sometimes supervene in indigestion, the most usual appears to be merely a degree of languor, causing delay in the passage of its contents, the consequence of the bile and other secretions being less adapted to support its due action. When its contents are longer delayed than usual, they become hardened, and irritate the surface of the intestine, sometimes causing both tenderness on pressure and a feeling of hardness in the part. This cause of course is to be removed by purgatives, and its recurrence prevented by all the means which tend to improve the abdominal secretions ; and when the tendency has been of long standing, I think I have seen these means rendered more effectual, and their effects more permanent, by blistering the tender part, which should be preceded, if the tenderness be considerable, by the local abstraction of blood.

The colon, like the stomach, is subject to thickening and induration of its coats. Where

the disease had existed long, I have known it found, on dissection, indurated through almost its whole extent. Whether constipation or any of the other attendants on indigestion ever give rise to such affections, without the co-operation of other causes, may be doubted, the former being extremely common, and the latter very rare. Organic affections of the colon sometimes arise after obstinate fits of constipation; but whether these act as a cause, or are only among the first symptoms, it is difficult to determine. When a tendency to such affections exists, frequent constipation can hardly fail to increase it, and may be the means of calling it into action.

In some cases, as I have witnessed on dissection, the extension of the tenderness across the region of the stomach has been found to arise from a diseased state of the pancreas. The deep seat of the pancreas, and the little evidence we have of its function, make it very difficult to distinguish its diseases. It would not be easy to point out any means of distinguishing them, except when the organ is so indurated or enlarged, that its shape and position may be distinguished

by the touch. Organic disease of this organ, like that of the colon, is probably more frequently the cause than the consequence of the Indigestion which attends it; although the symptoms are often so little modified, that the extension of the tenderness to the left side is often the only circumstance to distinguish such cases from the more severe and obstinate forms of common Indigestion.

Still more rarely the tenderness extends across the region of the stomach in consequence of preternatural growths formed in that region.

Such are the principal causes which I have learned from dissection to be connected with a permanent tenderness, extending to the left side across the region of the stomach in Indigestion and those cases so nearly resembling this disease as to be mistaken for it, which the frequent habit of examining this region has enabled me to ascertain. There are doubtless others which occasionally produce this effect, but the great length of time during which I have had it in view to ascertain its causes, induces me to think that the foregoing are the chief of them. I

speak of those cases which, less attentively considered, appear to be cases of common Indigestion. There are, of course, other diseases in which this tenderness arises from other causes, but which are of a nature altogether different from that we are considering, and which cannot be mistaken for it.

It sometimes, though rarely, happens in Indigestion, that the abdominal muscles in the neighbourhood of the stomach become tender by sympathy, and this tenderness will sometimes spread to a considerable distance, both downwards and to the left side. It is in general, however, easily distinguished by the usual diagnostics of muscular pains, and can hardly be confounded with any of the preceding affections.

The reader will perceive that in all of these affections there is something more to be feared than in the more common form of the advanced stage of Indigestion, in which the permanent tenderness never extends beyond the regions of the pylorus and first intestine. When it extends to the left side, which does not happen oftener than once in twenty or thirty cases, I always regard the disease

as of a nature different from Indigestion properly so called. Something is turning it out of its usual course, and the case, unless the extension of the tenderness towards the left side be transitory, will prove obstinate, if not serious.

The extension of the tenderness downwards, without any affection of the muscles, which is not uncommon in indigestion, either with or without its extension across the region of the stomach, is much less to be feared than its extension across the region of the stomach alone. It is by no means uncommon, and indicates much less difference in the nature of the disease, appearing almost always to arise from the affection of the first intestine spreading to that in continuation with it. In this way it seems sometimes to pervade the whole of the intestines, but is for the most part readily relieved by local blood-letting, unless it has become habitual, and then, like the tenderness of the duodenum itself, it often continues for a great length of time, without serious consequences; but always attended with a delicate state of health and symptoms of Indigestion, and

sometimes with a great deal of suffering, and much general derangement. In a few cases, more serious consequences ensue, and particularly in children : I have known this symptom followed by abdominal effusion. In such cases, we must suppose that the peritoneum partakes of the affection, and the case is of a nature essentially different from that of the common forms of Indigestion, although its symptoms always form the most prominent part of the disease ; and the treatment of the second stage of Indigestion, combined, if a tendency to effusion has supervened, with the use of the more powerful diuretics, is, according to my experience, by far the most effectual plan of treatment ; but here it is generally necessary to carry that plan to a greater extent than in cases of simple Indigestion, particularly as respects local evacuations.

In proportion as the tenderness increases, from whatever cause, or occupies a larger space, the tightness of the pulse becomes more considerable. The state of the pulse, however, is not wanted as a measure of the tenderness. The examination by pressure renders

any other superfluous; but the state of the pulse is not only the best, but, I believe I may say, the only certain, measure we possess of the general state of the secreting surfaces, a point of the first importance in regulating the treatment of Indigestion. Whatever may be supposed by those whose attention has been less particularly directed to it, a physician who has been accustomed to observe with care the changes of the pulse, and particularly to examine it in the way pointed out in the Treatise, to which this is an Appendix, will know, without a risk of mistake, from its state, that of these surfaces, not only here, but in all other diseases. The state of the pulse corresponds as correctly with the failure of power in them, as it does with the state of an inflamed part; but if we look for the same degree of tightness in both cases, and admit no pulse to be tight but that of active inflammation, we shall be disappointed, and, I have no hesitation in saying, deprived of the most correct means of judging of the general state of our patient in the more advanced stages of Indigestion. With respect to those who talk of the difficulty of distin-

guishing what they consider minute shades of difference in the pulse, I can assure them, that I have never met with one patient whom I have found it desirable to instruct in this respect, who did not in a short time acquire the power of distinguishing the different degrees of what I call a tight pulse, and who did not observe their connexion with the state of his feelings as well as the other symptoms of his disease.

Of the state of the Organs of Waste in Indigestion.

It very frequently happens, in the second stage of indigestion, that when the disease begins to yield, the patient gets thinner, whether he has been losing flesh previously or not, which arises from the organs of waste being the first to regain their due action.

The observations I am here about to make have little reference to the first stage of the disease; it is then merely a local disease. The stomach alone, or along with the organs immediately connected with it, is

debilitated. In the second stage the whole system, to its remotest parts, partakes of the disease. The pulse is everywhere tight, and the secreting surfaces debilitated.

It is not very uncommon, in the second stage of Indigestion, for the organs of waste to be more debilitated than those of supply, and for the patient, from this cause, to get full and bloated. He acquires what, in common language, is called an unhealthy kind of fat. Part of what ought to be thrown off by the skin and other excretories is retained, and contributes not a little to the distressing feelings which the patient experiences. When this has happened to a considerable degree, the thinning is often rapid on the organs resuming their due functions ; but even when this is not the case, the patient almost always becomes thinner in the first part of his recovery. As it advances, however, and the organs of supply begin to resume their proper functions, he begins to regain flesh, and by degrees generally returns to the standard natural to him in health, and thus generally becomes fuller than he has been during the greater part of his com-

plaint. The loss of flesh without the loss of strength in the early part of the treatment, I have found almost a certain sign of ultimate recovery.

When there is also a tendency to increased depression of strength at this period, much attention on the part of the practitioner is necessary ; for if this amount to any considerable degree, and is anything more than a transitory feeling, it will be found essentially to interfere with the progress of the cure. There is no point in the treatment of the second stage of Indigestion which deserves more attention than that I am here considering. I shall therefore inquire into the causes of this tendency to an increase of debility in the commencement of the proper plan of treatment, and the means necessary to obviate it.

It evidently arises from several causes, but I believe chiefly from the following. All causes of irritation tend more or less to excite a feverish state. Hence the tight pulse, and frequent occurrence of some feverishness, particularly towards evening, in the second stage of Indigestion, one of the most

severe and obstinate causes of irritation. The tight pulse, indeed, which is always present in a greater or less degree at this period, constitutes itself a certain degree of feverishness, and, when considerable, is accompanied with all its essential symptoms. The vessels, in consequence of the continued irritation of the most sensible nerves of our frame, are excited to embrace the blood more strongly than in health; hence the tight pulse. Now this state, although a morbid one, tends for the present to support the strength, and we know, when in the extreme, will even give a preternatural degree of strength. I have repeatedly been consulted by dyspeptics, who said that the most unaccountable peculiarity of their case was, that they never felt tired, but felt as if they could walk for ever. This, so contrary to what is usual in Indigestion, arises from peculiarity of habit; but strikingly illustrates a point of great importance in the nature of the disease. In such patients, the nerves are so braced by the tightened circulation, as not only to obviate the usual debilitating effects of the irritating cause, but even to give a preternatural vigour.

Could we suddenly relieve the dyspeptic from the causes of irritation to which he has been so long subject, by at once removing his disease, he would feel a depression of strength, till the nerves had accommodated themselves to the change. The tightened state of the circulation would be relaxed, and the effect of this would be increased by the secreting surfaces, which were bound up, beginning to separate more freely their various fluids, and also by the alimentary canal being less distended with flatulence and a collection of undigested food, which, however injurious, for the time gives tension, and therefore tone. On the same principle, if the water be too suddenly drawn off in dropsy of the abdomen, even by a greatly-increased action of the kidneys, and still more by tapping, the patient feels an extreme sense of depression, and, in the latter case, often faints altogether. The pressure which braced both the circulating system and the nerves is taken off more suddenly than the system can accommodate itself to the change.

Thus it is, that even a change of diet from one of difficult to one of easy digestion, is

sometimes attended with a considerable degree of depression, and that when no medicine is given, and more nourishment is actually received by the system, for what is not digested cannot nourish ; so that even this change, the most essential for a dyspeptic, must be made with some degree of caution in protracted cases, and it should often be a work of considerable time to bring the patient to the proper diet.

If it is attempted too suddenly, he will tell you that his constitution cannot bear the diet you prescribe, and be discouraged from seconding your views, and, not unlikely, deprived of all chance of perfect recovery ; for without a certain attention to rules of diet, the cure of Indigestion, particularly when of long standing, is impossible. What means will remove a disease, the causes of which are being continually applied?

Another cause of the depression which is apt to attend the first employment of the proper means in the second stage of Indigestion is, that it is impossible to relieve cases of long standing without some of those measures which more directly soften the pulse and relax the secreting surfaces.

To produce a soft skin and a natural pulse in such cases, without which the patient can never be considered as cured, nor can he ever have the feelings of health, it is seldom sufficient to remove the causes of irritation. The bad habit is formed, and it must be corrected by such means as excite the secreting surfaces ; in short, such means as take off the slight feverish state which prevails in the system*, and more or less interferes with all its functions. Thus it is that alterative and saline medicines become necessary. But the reader will easily see why it is requisite, particularly at first, to employ them very cautiously ; and this caution is doubly necessary, because the patient has generally been in the habit of using some of the stimulating means, which constitute the appropriate treatment of the first stage.

* It is not uncommon for the patient to say, that he has a constant inward fever ; and when he is called upon to explain this expression, he says there is often a sense of heat internally, even when the surface is cold. We are too apt to trust to our previous knowledge, and disregard the observations of our patients, forgetting that all valuable knowledge, as far as relates to the practical part of our profession, is acquired by attending to the phenomena of disease ; and that there are many of these phenomena, the knowledge of which we can acquire in no other way than by what the patient says.

The difference in the manner in which different individuals bear the changes necessary to recovery, in advanced states of the disease, is very remarkable. In some the habit may be quickly altered with but little depression of strength ; while in others it requires all the attention of the physician to prevent a considerable degree of it—such is the difference of constitution. The treatment should be regulated accordingly, and any great degree of depression prevented. It is to be observed, however, that the greater part of this depression is not, properly speaking, actual debility, as the intelligent reader will perceive from what has just been said. I beg to refer him to the observations on this subject in my Treatise on Indigestion.

The physician may overlook the essential change which takes place in the progress of Indigestion, and constitutes the difference between what I have called the first and second stages ; but it is impossible for the patient himself to overlook it. We constantly find dyspeptics declaring that the stimulants which used to relieve them seem now to do harm ; and that they cannot continue

their use for many days together, although the sense of depression which they feel on abstaining from them, still impels them to return to, and even to increase them, by which they never fail to aggravate the disease. They are taking a course exactly the reverse of the only one which leads to health.

In this dilemma it is common to recommend change of scene, a mild and nutritive diet, mineral waters, and no more medicine than the patient finds absolutely necessary ; and there is a great deal of good in all this ; but, in a very large majority of such cases, these means prove ineffectual. The cure is then said to be hopeless, and the patient must use the means which his experience tells him suit him best, and make himself as comfortable as he can. In such cases a permanent cure can generally be effected by no other means than simply removing the tight pulse and bound state of the secreting surfaces, by gradually weaning the patient from his stimulants, at first rejecting the more powerful, and combining the milder with those means which, without acting as

stimulants to the stomach, already too much stimulated, both by the disease and the means employed for its relief, excite the organs, to which the debility, originally confined to the stomach, has now spread; in consequence of which the system is neither receiving what it ought to receive, nor throwing off what it ought to get rid of; and thus the disease, in one of its most distressing, and in by far its most obstinate form, prolonged.

When this necessary change of measures produces depression, the remedy is simply to make it by slower degrees, to make the dose of the alteratives extremely small, and to retain as much of the tonics as will not materially interfere with the only means of restoring health.

The depression in the commencement of the proper treatment of Indigestion is increased by another cause. The pleasures of the table generally form a greater proportion of the enjoyment of life than we are willing to acknowledge, and it is very disagreeable to be restricted in them. A little time, however, generally convinces the patient that the solid

advantages of a mind and body at ease, and capable of performing with satisfaction the various duties of life, greatly overbalance the feverish enjoyment of any gratification which materially interferes with them.

By taxing the digestive organs beyond their power, the function of every part becomes a burthen to it. For here, as in every other instance, we still observe the sympathy of other parts of the system with the state of these organs. If they be irritated, every other part is inclined to partake of the irritation. If an inflammatory tendency be excited in them, in like manner every part partakes of this tendency; and if their functions be oppressed, no other is well performed.

The foregoing, then, are the chief causes of depression which operate in the commencement of the proper, and I believe the only effectual, treatment of the more advanced stages of Indigestion. To recapitulate in a few words the heads of what has been said—such is the nature of Indigestion, that, after it has continued for some time, by the nervous irritation which attends it,

it tightens and binds up, if I may use these expressions, the circulating and secreting systems. This state, while it torments with a thousand distressing feelings, gives a species of unhealthy vigour, which the patient resigns with reluctance, and which he should only be called upon to resign very gradually, and, as far as possible, only in proportion as a more healthy vigour is substituted for it. The means of effectual and permanent relief are all such as tend to relax the morbid constriction of the vital parts, but they must only be employed to an extent proportioned to the state and habit of the patient; and combined with as large a proportion of the tonic plan as can be borne without interfering with the essential part of the treatment.

In the preceding observations I have kept in view the usual, and what I would call the regular, course of the disease. I do not know that any attempt has hitherto been made to ascertain what its regular course is. Its symptoms are very various, and at first view nothing can be more irregular. When more carefully observed, however, it will be

found to take a course as determinate as other diseases, except that it is more liable than most others to deviate from its usual course, because it is influenced by a greater number of causes, and, from its phenomena depending so much on the state of the nervous system, by causes of a slighter nature, and consequently more liable to escape observation.

But those who take the trouble to separate the essential from the accidental symptoms, that is, the symptoms which appear in all cases, and therefore constitute the disease, from those which from peculiarity of habit, or other causes, appear only in particular cases, will find that, in the first instance, it consists of a deranged state of the function of the stomach alone; that the derangement gradually spreads to the function of the organs nearest to it, and with whose function that of the stomach is most intimately connected; and that at length, from the continued irritation of the nervous system, on which the function of every part more or less depends, it becomes a disease of the whole system.

They will also see clearly that, however it may be modified in particular instances, this disease of the whole system is exactly of the same nature as other affections of the whole system arising from other causes of irritation ; that is, that it is a state of fever ; a disease which admits of infinite variety, from a degree hardly perceptible, to that which destroys life.

In long-protracted nervous fever we sometimes find the functions only deviating a little from the healthy state. The patient, when he is still, feels very well ; his appetite is moderate, he digests pretty well. The pulse is a little tight, but not more frequent, perhaps, than natural ; the secreting surfaces are less free than usual, but their function is but little deranged. The patient is listless, less capable of exertion, perhaps subject to occasional fits of heat, particularly of the hands and feet, but can hardly be said to be ill, and wonders he does not get quite well. There is no physician who has not seen those, in protracted cases of the milder forms of nervous fever, in such a state as is here described.

In what does this state differ from many

cases of protracted Indigestion, where the spreading of the disease to the whole system has, to a certain degree, relieved its original seat, in the way I have explained it is found to do in many cases of long continuance? * The states are the same, the only difference is in the causes which produced them. But there is this material difference in their tendency. In the case of simple nervous fever there is no local weakness supporting the disease; and the various organs gradually, though slowly, resume their due functions. In the case of Indigestion, the original weakness, though alleviated by the presence of the general disease, still exists, and is apt to be aggravated by slight causes, and even by the abatement of the general affection which has relieved it; and thus, if means are not used to strengthen the digestive organs, the state of general irritation may be kept up, till the structure of some organ, more inclined to disease than the rest, deviates from the healthy state, and becomes permanently unfitted for its function.

Such I consider the regular course of In-

* Treatise on Indigestion.

digestion, in the sense in which I use the term ; but its symptoms, as I have just had occasion to observe, and as is more or less the case with all diseases, are apt to be modified by accidental causes. On one of these modifications I shall here say a few words, because it is a very essential one, and particularly connected with the part of the subject we have just been considering, the state of the organs of waste in this disease.

In all cases the tendency of fever is to bind up the surfaces, and when they are relaxed, the fever is usually relieved, or ceases ; but it sometimes happens, in ordinary cases of fever, that the surface is relaxed and moist, without relieving the symptoms. Something has taken the disease out of its usual course, and we generally find such cases obstinate.

Now, in the febrile stage of Indigestion, if I may use the expression, we now and then meet with the same deviation from the usual course of the disease ; and the skin, instead of being obstinately dry, its usual state at this period, is constantly moist, or ready to become so on every slight occa-

sion, without any relief to the disease, while perhaps the mouth and other secreting surfaces are dryer than they ought to be. Cases of this kind almost always prove obstinate. The disease, from some cause which it would be difficult to ascertain, (in general, perhaps, peculiarity of constitution,) is forced from its natural course. In such cases the pulse is generally feeble, though still always more or less contracted if examined in the way I have pointed out; but less so than in the common form of the second stage; and the debility is generally great.

The intelligent reader will readily perceive the tendency of this deviation from the usual course of the disease as respects the foregoing principles of treatment. It confines the practice, as far as regards the relaxing part of the treatment, and both renders the tonic part more necessary, and the patient more capable of bearing it. But it has neither of these effects to the degree which we might *à priori* be led to suppose. A less free employment of the former set of means is still found of service, especially when the

patient, as often happens, still has occasional fits of heat, and is generally necessary to enable him to bear any considerable degree of the tonic plan ; and the frequent repetition of the minute dose of the mercurial, I have found by far the most powerful means of checking the debilitating sweats, which are always increased by every additional irritation of the digestive organs, and relieved by whatever promotes a more healthy action in them.

The practitioner will also generally be disappointed if he expects to find his patient bear tonics as well as the state of the skin alone would indicate. Some caution he will still find necessary in their employment. The relaxation of the skin, as has just been observed, does not always indicate general relaxation in this disease. The other surfaces are often still bound, and the particular state of the skin, as far as so general an affection can deserve the name, may be regarded as a local affection ; rather as one of those anomalous symptoms which depend on peculiarity of constitution, than as indicating a change in the general nature of the dis-

ease ; besides it often happens, in such cases, that this relaxed state of the skin alternates with its usual dry and bound state.

In like manner, in Indigestion, there is sometimes an habitually relaxed, instead of the usual constipated, state of the bowels. This is a more common deviation from the usual course, and influences less the general course of the disease ; but, like the relaxed state of the skin, it is only favourable when it brings relief ; that is, when it indicates a free and general action of all the secreting surfaces. When the bowels are relaxed, and the skin remains arid, as frequently happens in such cases, this state of them only adds to the disease. It is also distinguished from that which indicates a favourable change, by generally going to greater excess, and often proving obstinate.

I have found no other tonic so useful, where the skin is habitually relaxed in Indigestion, as the sulphuric acid. In general, indeed, in this disease, I have found it a most valuable medicine, on first returning to a more tonic plan ; where the more urgent symptoms of the second stage begin to

yield, but the patient is not yet able to bear more powerful tonics. This is analogous to what we observe of this medicine in fever, when the stage of excitement begins to be changed into that of depression—when we have obtained an imperfect relaxation of the secreting surfaces, but the habit of the fever is not yet subdued. The sulphuric acid does not seem to possess the same alterative power as the muriatic and nitric acids ; but I have no hesitation in saying, that, for the purpose here pointed out, it is superior to either of them. This subject leads me to some more general observations on the medicinal part of the treatment in the second stage of Indigestion, in addition to what is said in my Treatise on that disease.

*Of the Principles of the Medicinal Treatment
in the more protracted Cases of Indigestion.*

It appears, from what has been said, that when the symptoms of the second stage are well formed, the more permanent effect of stimulants is always hurtful. They are used only as a means of relieving the sense

of depression, and because their use in the earlier part of the disease has formed a habit which renders their continuance more or less necessary. As far, then, as the more temporary stimulants answer these purposes, they are to be preferred. Simple stimulants are preferable to what are called tonics, which excite less for the moment, but whose effects remain longer.

When we have succeeded, however, in relaxing to a certain degree the sanguiferous system and secreting surfaces, the more permanent effect again begins to be beneficial, and the relaxation of the surfaces, to which the patient has been so long unaccustomed, demands it. As there is a period in the progress of the disease at which the more permanent stimulants can no longer be borne, so there is a period in the progress of the recovery at which they may again be employed with advantage. They must now, however, be used with more caution than in the first stage of the disease; otherwise their tendency to renew the state, from which the patient is just relieved, generally soon shows itself.

These principles kept in view, together with attention to the peculiarities of the patient's habit, will generally point out what is best to be done, for which no general rule can be laid down, except, as I have already had occasion to observe, that our practice should lean as much to the tonic plan as the nature of the case admits of.

They lead us, in the first instance, except where the febrile tendency is great, to combine the lighter bitters, as camomile and orange-peel, the warmer gums, and the preparations of ammonia, with the appropriate treatment of the second stage, taking care to keep within the limit at which they show a tendency to increase the oppression or heat of the skin ; and it is not very uncommon to be obliged to lay aside every medicine of this kind, even camomile-tea, the least stimulating of all.

After the constitution has, to a certain degree, experienced the effect of the alterative, we are led to combine with it the mineral acids, iron, and even the bark, of which the sulphate of quinine is the best preparation, according to the circumstances of the case

and the constitution of the patient. But, even at this period, if these or any other tonics are found to produce dryness of skin, any very sensible tightness of pulse, increased heat, a sense of oppression, either general or referred to the stomach, or, in short, any considerable degree of those symptoms which characterise the second stage of Indigestion, the dose must be lessened, and, if necessary, they must be laid aside. Of these means the acids can most frequently be borne; next to them the preparations of iron, and least frequently the bark, although, where it can be borne, it is the most effectual.

The early use of tonics, it has already been observed, is more called for, and generally more admissible, in the cases which I have just had occasion to mention, in which the usual course of the disease is disturbed, and the debility of the surface appears in a relaxed, rather than a constricted state.

In the use of such means in the second stage of Indigestion, a free state of the bowels is essential. After the symptoms of this stage have been nearly removed, the best

effects often arise from the preparations of iron combined with mild aperients, the alteratives being used at intervals of shorter duration, in proportion to the tendency to relapse.

The following facts are of consequence, both as relating to the treatment of a case of considerable difficulty, and illustrating in a striking manner some of the principles we have been considering. It sometimes, though rarely, happens, that those who have long been accustomed to a certain degree of tightness in the pulse, cannot, even for years, be brought to bear one as soft as the perfectly-healthy pulse; all the means which produce such a pulse occasioning in them a considerable degree of depression, often such as unfits them for all the active duties of life; yet they are capable of most of those duties, and, on the whole, enjoy a tolerable share of health, if some degree of tightness be allowed to remain in the pulse.

In such cases I have found it the best plan only occasionally to have recourse to medicine, when the symptoms have been accidentally aggravated, and in general to

trust to a proper diet, a regular state of the bowels, and such exercise in the open air as the patient's strength and feelings admit of; for much exercise is often prevented, as much by the uneasy feelings it excites, as by actual debility.

It is generally very easy in these cases wholly to remove the tightness of pulse, by any of the means which excite the vessels of the surface, and sometimes even by rendering the diet less stimulating; but the relief thus obtained is not proportioned to the sense of depression which the perfectly soft pulse causes, to which the system accommodates itself with greater difficulty than usual. By slow degrees, however, it is at length brought to do so, and then the cure is completed. I have never seen this state, except in those in whom the disease had continued for many years, and it by no means occurs in most of them. In general the patient can, in the course of a few months, be brought to bear a perfectly soft pulse; and the cure requires, for its continuance, only a degree of caution, which, in proportion as the habit of health is established, may in

most cases, in a great degree, be very gradually dispensed with.

It appears, from many of the preceding observations, that not only in these, but in the more ordinary cases of protracted Indigestion, the completion of the cure depends much on the management of the patient after the more urgent symptoms have been subdued; and that, in order to restore him to a state of permanent health, some return to the tonic plan of treatment is generally necessary. Many suffer relapses, or remain long in a debilitated state, in consequence of this part of the treatment being neglected. The patient, perhaps, has left the neighbourhood of the physician, or, feeling himself relieved from the more urgent symptoms, thinks it unnecessary to apply to him, and he often has a horror for tonic medicines, the bad effects of which he has experienced, and would soon again experience, were they incautiously administered. Some habits are sufficiently vigorous, on the removal of the symptoms peculiar to the second stage, particularly when it has not been of very long duration, not to require them; and some, so irritable

and so disposed to a recurrence of these symptoms, as not to bear even their most guarded use; many instances of which I have seen.

I had occasion to observe, in my Treatise on Indigestion, that as the symptoms which constitute the second stage of the disease, become established, the original symptoms often become milder, and sometimes almost disappear. It is remarkable, on the other hand, that, in the progress of the cure, as the former are relieved, the latter are apt to increase or return. The patient often remarks that, although he is so much better in his general health, he is more troubled with his old stomach complaints than he had been for a long time, and feels himself more incommoded by errors of diet than when he was so ill. This observation requires all the physician's attention; for if these warnings be neglected, the first stage will again be established, and, as I know from repeated experience, much more readily, than in the first instance, changed into the second stage.

The strictest attention to diet and exer-

cise, the cautious use of tonics, and occasional mild alterative doses to protect against a recurrence of this stage, even where the bile appears but little, if at all, deranged, constitute the proper treatment. It is only in the more obstinate cases that this recurrence of the first stage is observed in any remarkable degree. The patient must then arm himself with patience and perseverance, if he wishes to be restored to any thing like permanent health. In such cases the disease lingers, either in consequence of the effect of long habit, or of an unusual want of vigour in certain parts of the constitution.

Indigestion sometimes proves obstinate in another way, still more distressing. In general the good effects of the proper plan of treatment in the second stage are soon perceived, sometimes in a few days, and, for the most part, within a week or ten days ; but in some cases of long standing the disease proves more obstinate, and although the patient generally experiences some amendment, it is not such as to induce him to persevere in the plan of treatment. Some patients of this description, after having again recurred to

other plans, and experienced their inefficacy, have been induced to listen to the hopes of relief held out to them by longer perseverance in the foregoing means; and even where these had been employed for months without decided amendment, this amendment has at length come, and has not been less than in many cases where it came more quickly. Such cases, several of which I could at this moment point out, have convinced me that, even in the most obstinate, there are no means of relief, when the disease has arrived at the second stage, but those of exciting the secreting surfaces, and thus restoring the proper balance of the circulation; and that in the cases which at first appear the most hopeless, this may often at length be effected. Experience has taught me to despair of no case in which a change of structure in a vital part has not made considerable progress; and it luckily happens that the parts chiefly concerned in Indigestion may have their functions seriously disordered for a great length of time, without any change of this kind taking place.

There are three medicines, the importance

of which, particularly of the first and last, is so great in the treatment of Indigestion, that a few additional observations on their employment are particularly called for, and the more so, that none of them have been very generally employed in that disease; I mean nitrate of potash, tartarized antimony, and ammonia.

Of the Nitrate of Potash.

SOME saline medicine I consider essential in the second stage of Indigestion, for reasons which have already been pointed out; and I have found none so beneficial as the nitrate of potash. I feel no hesitation in saying, on the one hand, that it enables us at this period to lessen the quantity of mercury, and on the other, that increasing the quantity of the latter will by no means produce the good effect of combining it with this nitrate, to say nothing of the greater tendency of mercury to impair the strength.

The nitrate of potash is chiefly indicated when there is a tendency to an increase of heat in the evening, or during the night,

and particularly to a burning in the hands and feet ; and in such cases its good effects are both greatest and most quickly apparent ; but they are not confined to such cases. When there is no increase of heat, and even when the temperature is below the healthy standard, if this be not the case in a considerable degree, I still find this medicine to add to the good effects of the alterative course, provided there is an evident tightness of pulse, when examined in the way pointed out in my Treatise on Indigestion : but in such cases it is generally proper to combine it with some warm medicine. Small doses of tincture of orange-peel, or the compound tincture of cardamoms, are those I have generally employed.

When I first made trial of this combination, I doubted whether the good effects of the salt would not be wholly counteracted by the warm medicines ; but I soon found that this is by no means the case, and that the advantage derived from the former, as an alterative, is very little interfered with by the latter. Here, it is true, we do not obtain the cooling effect of the salt ; it is com-

bined with the tincture to prevent this effect. It is its effect on the vessels of the digestive organs, and on the extreme vessels in general, that is wanted, and which appears to be little, if at all, impaired by this addition.

It is generally, not always, as might be supposed, in those cases where the surface is most inclined to be cold, that the patient is most subject to depression of strength and spirits. Here warm medicines are doubly indicated, and the occasional use of ammonia, even in considerable doses, I have found very beneficial, and very little liable to interfere with the alterative effect of the nitrate. The effect of the latter, however, sometimes materially interferes with its effect. I have seen some in whom the languor of circulation and coldness of habit were such, that the chilling effect of the nitrate could not be counteracted by any stimulus it would be proper to employ. In such cases the nitrate must be abandoned. They are, however, comparatively rare.

In a still smaller number, from idiosyncrasy of constitution, even very small doses of this salt cannot be borne, apparently from the

irritation of the stomach and bowels which they occasion ; and I have met with cases in which none of the salts, into the composition of which potash enters, could be borne.

Although the cases in which it is necessary to abandon the nitrate of potash are rare, it is not very uncommon to be obliged to give it in small doses, five or six grains. It should never be given in such doses as very sensibly to add to the sense of depression. But such in general is the effect of this medicine in the second stage of Indigestion, that it is not at all uncommon for patients, guided merely by their own feelings, to continue the use of it after they have gradually laid aside all others, and to declare that they derive from it a kind of relief which they never experienced from any other means. This has not been the observation of one or two, but of a large proportion of those who have used it. Yet nobody would think of giving nitrate of potash in the commencement of Indigestion ; and it is not even mentioned in the catalogue of stomachic medicines. Can any opinions be brought in opposition to these, and many similar facts,

laid before the reader in my Treatise on Indigestion, tending to establish the same position; that the nature of this disease is changed in its progress, and requires in its different stages very different, and even opposite plans of cure? Those who maintain such opinions have a very imperfect knowledge of Indigestion. Their knowledge of it has never gone beyond the first stage; from which their views of its nature, as well as plans of treatment, are derived; neither of which, a more careful observation will teach them, are applicable to the stage before us.

I have found the good effects of nitrate of potash sensibly increased, by combining with it a small quantity of mucilage, and a very slight anodyne. From six to twelve minims of tincture of hyoscyamus, or a combination of two or three drops of laudanum with four or five of wine of ipecacuanha, I have found the best. These doses will only appear trifling to those who have not attentively watched the symptoms of Indigestion, in the more advanced stages of which the nerves, from repeated irritation, often ac-

quire a sensibility which appears almost incredible. The gums are among the least sensible parts of our frame, but those who have been troubled with carious teeth, know how exquisitely sensible they may be rendered by irritation of long continuance.

I have had occasion to observe, that Indigestion attends, and, I might have said, lays the foundation of most of the diseases of infancy; and it is remarked, in the Treatise to which this is an Appendix, that the duration of the first stage of Indigestion is very various, the symptoms of the second stage showing themselves at various periods in different cases. In children, those of the second stage supervene very early, and the disease in them often appears to commence in the liver rather than the stomach, the latter suffering only secondarily, which is the reverse of what usually happens in the adult, at least in this country. It is the early supervention of the second stage which renders saline medicines so essential in their diseases.

If the disease has made any considerable progress in them, no course of mercurials,

or any other means will succeed well without medicines of this description; and I have found the nitrate of potash invaluable in most of their diseases. Their nerves, as well as vessels, are more irritable than those of the adult. It is on this account that in them the more advanced stages of indigestion supervene more readily, and are attended with more fever, and more apt to produce serious derangement. Continued irritation of the digestive organs, which in the adult produces a tight pulse, and often a tendency to increased heat; in them produces actual fever, which is only a greater degree of the same symptoms.

Such is the nature of what has been called the remitting fever of children, which is so apt, when neglected, to end in effusion on the brain, the part in children most liable to suffer from the general irritation kept up by a deranged state of the digestive organs. For once that the hydrocephalus of children arises from other causes, it arises twenty times from affections of these organs.

Of Tartarized Antimony.

TARTARIZED antimony is proper in many of the same cases in which nitrate of potash is so beneficial; but it is a medicine of very different properties, and the principles which regulate its employment are very different. It appears, from experiments which the College of Physicians did me the honour to publish in the last volume of their Transactions, that of all the means that were tried, tartarized antimony had the greatest effect in suddenly exciting the action of the skin. It has comparatively little effect in exciting sensible perspiration; but, as appears from these experiments, as well as many other circumstances, it is not by sensible perspiration, but by a free state of the insensible action of the skin, that its vigour is indicated.

When the reader considers what has been said respecting the state of the skin in Indigestion, he will be prepared for the good effect of such a medicine in the more protracted cases of this disease. I have had many patients who told me that they could always secure a good day by exciting sensible

perspiration in the morning. This, for a reason just mentioned, and others stated in my Treatise, should not be our aim in Indigestion; but it is more favourable than the arid state of the dyspeptic's skin, and affords temporary relief.

When the surface is dry and the tendency to feverish attacks considerable, and we have reason to believe that the disease is, in a great measure, supported by the general state of the secreting surfaces, the tartarized antimony, as might *à priori* be expected, is often a valuable medicine; and I was agreeably disappointed to find that doses so minute as neither to excite nausea, nor any increased sense of debility, are often sufficient to produce a sensible improvement. A slight degree of nausea, if it be only occasional, I have found of little importance, and, contrary to what might be expected, it seldom even impairs the appetite. The antimonial has always been laid aside when it has appeared to increase the sense of sinking. The dose I have employed has generally been from the tenth to the eighth part of a grain, three or four times a day. I have never seen

the least bad effect from such doses, even when continued for months ; and the patient, when it was laid aside, missing its good effects, has often requested to be allowed to resume it.

Analogous to what takes place in fever, when the tendency to increased heat is greater than usual, it has been found particularly serviceable, combined with the nitrate of potash. But of all the cases in which it was employed, it was found most beneficial in those where the dry skin and debilitated state of the other excretories had produced a determination of blood to the head, and it has been found necessary to continue it in such cases, after all other medicines had been laid aside.

Even in the early periods of the disease, great advantage is often derived from combining small doses of tartarized antimony with cathartics. It frequently has an operation on the bowels analogous to its effect on the skin, relaxing the surface, and thus rendering the action of cathartics more free. The same observation, indeed, applies more or less to all the secreting surfaces. In this

respect its operation resembles that of mercury, but it produces its effects more quickly, and they are not, as in the case of the latter, apt to accumulate in the constitution, which makes it a less powerful medicine, but renders it safer, and thus, under certain circumstances, increases its utility. It may sometimes, with great advantage, be substituted for mercury, and very often combined with it, for the purpose of rendering less mercury necessary.

The beneficial effects of antimony, in cutaneous affections, has long been acknowledged; when Indigestion produces such affections, therefore, it is doubly indicated.

The operation of the colchicum is in many respects analogous to that of antimony; I have often used it, in very minute doses, for the purpose of relaxing the skin and softening the pulse in the advanced stages of Indigestion. It was not among the medicines whose effects were compared with those of tartarized antimony, in the experiments just referred to; I cannot, therefore, say whether on the whole it may be equal to that medicine as a diaphoretic. In some

respects it bears the same relation to antimony that this medicine does to mercury. Its effects are more sudden and more transitory ; but it is capable of more violent effects than either of those medicines, and must always be used with caution, except in very minute doses.

The colchicum often has a peculiar effect in relieving the local inflammatory affections, so apt to supervene in protracted cases of Indigestion, particularly those of the head and chest, and rheumatic pains of the muscles. I have often been disappointed in this effect of the colchicum before evacuations, and seen it act like a charm after them. When employed only with a view to relax the pulse and excretories, I have used it in extremely small doses ; in rather larger doses with a view to relieve cough and pain, but always lessened the dose, if it produced more than a very gentle action on the bowels, or a decided softness of the skin.

In the second stage of Indigestion, whatever plan is adopted, much depends on the gentleness of the effect produced. I have long been convinced that this state is only

to be removed by a slight effect regularly kept up for a considerable length of time. All powerful means, which are necessarily transitory, because they would soon destroy the patient if they were continued, fail to cure, and very often aggravate it.

In the first stage, when the strength is unimpaired, and the habit of the disease feeble, powerful means will sometimes at once check its progress. In the second stage, where the opposites of these conditions obtain, this never happens. It is by the most gentle and frequently repeated impressions that the organs are solicited once more to resume their healthy action.

From what has just been said of the effects of the colchicum, compared with those of antimony, the reader will perceive that the former is, on the whole, less suited to the second stage of Indigestion than the antimony ; although its more speedy operation, its peculiar effect in relieving the inflammatory tendency, and particularly the power it sometimes evinces of allaying pain and cough, renders it preferable under certain circumstances.

The effect of tartarized antimony in severe nervous agitation is very remarkable. Its power, even in allaying the symptoms of mania itself, is well known. I have found rather larger doses than those just mentioned, combined with moderate doses of hyoscyamus, by many degrees the most powerful means of allaying the more severe forms of nervous irritation which now and then appear in protracted cases of Indigestion, not depending on any local irritation, the seat of which the patient can point out, but on the state induced by long continued irritation of the general source of nervous power. The medicine we are next to consider has also a very powerful influence on the nervous system, but in a different way.

Of Ammonia.

THE effects of ammonia in certain states of Indigestion are very valuable, and such as cannot be produced by any other means. We have no other means which so powerfully excite the nerves with so little disturbance

to other parts. My attention was called to it above twenty years ago, by the essential benefit derived from very large doses of it in a case which had resisted all the usual means.

In some cases of Indigestion, with the contracted pulse of the second stage, the vital fluids seem, as it were, to leave the surface, which is obstinately cold. The pulse in such cases is always very feeble, and the patient, for the most part, complains of great depression, hangs over the fire, and says that no exercise he can take has the effect of warming him. The nerves here are failing in one of their essential functions, that of supporting, by their action on the blood, the due degree of animal temperature; for in all such cases the temperature, measured by the thermometer, is actually, and sometimes considerably, below that of health. Here the ammonia is invaluable, being less apt, than any other stimulus of the same power with respect to the nerves, to excite the heart and blood-vessels; which, from the tendency of the disease, are inclined to a degree of excitement beyond that in

due proportion to the state of the other powers.

The carbonate of ammonia may be taken in doses of from five to ten grains several times a day with safety, and probably in larger doses ; and it rarely fails, if given in the proper dose, with such exercise as the patient can bear, to diffuse warmth throughout the system. Nor is the benefit derived from it of a mere transitory nature. A state of chill tends not only to aggravate all the symptoms, but to confirm the disease. I have even known the digestion constantly deranged by the temperature of the room being so low as to cause a feeling of chilliness.

Ammonia is also a valuable medicine in most of the nervous affections which attend Indigestion, even when the patient is not particularly chilly, provided the nerves are so far languid in the function of preserving the temperature, as to allow of its being taken in considerable quantity, without heating too much, an inconvenience which attends the free use of it in most cases of the second stage of the disease.

I have little doubt that, to the tendency of ammonia to excite the skin, we must in part ascribe its good effects in Indigestion. It is probably chiefly to this effect that we ought to ascribe the advantage derived from some of its preparations, particularly the liquor ammoniæ acetatis, in the second stage of Indigestion ; in which I have repeatedly seen it eminently serviceable, when the ammonia itself heated too much. Nothing, in this stage of Indigestion, more requires the attention of the physician than adapting the tendency of the treatment, to heat or cool, to the circumstances of his patient. If we here attempt to lay down any general rule, we shall be led into error. The peculiar circumstances of the disease or constitution, for reasons which we cannot always detect, bear the one or other tendency better in one case than in another. The state of the pulse, and the effect of the means employed, are our best guides ; and on our forming a correct judgment in this respect, both the comfort of our patient, and his final recovery, greatly depend.

These observations are as applicable to

diet as medicine. I have elsewhere pointed out that there are cases of the second stage of Indigestion, in which an abstinence from animal food is proper; such cases, however, are rare. But when the pulse is obstinately tight, abstaining from it two days in the week, I have sometimes found to produce an effect which it is impossible to procure by any other means. The patient has felt himself almost immediately more at ease. The bowels in particular have become less irritable, and more obedient to medicine; the skin softer, and the countenance much improved, and the ammonia, or other stimulants of the nervous system, better borne. The patient is often so pleased with the effect, that he thinks he has found a sovereign remedy for all his complaints. Let a dyspeptic, whose pulse has not acquired the same degree of tightness, and whose skin consequently is softer, follow the same plan, and it will do little more than add to the debility, and increase the flatulence both of the stomach and bowels. On the other hand, the stimulant, which the latter will tell you saves him from

despair, given to the former, will hardly fail to increase all his sufferings; and yet, to a superficial observer, these two patients are much in the same state. They both complain of depression of mind and body, and those thousand nameless symptoms which attend irritation of the nerves of the stomach and bowels, rendered doubly sensible by their long-continued irritation.

Of the Influence of Habitual Indigestion on other Diseases.

So general a complaint is Indigestion in this country, and so much does it influence other diseases, that there could not perhaps be a more useful treatise, than one on the manner in which the nature and treatment of other diseases are influenced by their concurrence with it. I need hardly say that the subject is much too extensive to admit of any thing like a general view of it being attempted here. In my Treatise on Indigestion, I have made some observations on its concurrence with fever, properly so called; and I shall

here say a few words on its concurrence with two other diseases, which are essentially influenced by it, and with which it has happened to me very often to see it combined.

Of local diseases, we should expect to find those most influenced by Indigestion, which have their seat in those organs which most sympathize with the digestive organs. Thus it is, that in all affections of the brain and lungs, the effects of this sympathy are very striking; and it appears, from what is said of the third stage of Indigestion, in the treatise just referred to, that we have reason to believe that some of the most severe affections of both these organs are often even caused by it.

It is remarkable, that although those who have long laboured under Indigestion are more subject to inflammatory affections than those in health, they are much less subject to their more acute forms, all the diseases of habitual dyspeptics partaking more or less of the chronic nature of the habitual affection. They are rarely attacked, for example, with the acute inflammation of the brain and lungs to which the more robust

are subject ; but in them, with milder symptoms, these diseases are often equally, or more dangerous, which arises from several causes : the previous debility ; the means of relief being more circumscribed, for habitual dyspeptics, even where they do not appear much debilitated, generally bear loss of blood ill ; the continual irritation of the habitual disease, and the digestive organs generally partaking of that which has supervened. Besides, in proportion as the system is debilitated, its healing powers, on which the success of all our means depends, are impaired.

The frequent obscurity of the symptoms, by which the state of the digestive organs is ascertained in such cases, may also be ranked among the sources of danger ; for in consequence of it, the attention of the practitioner is often confined to the symptoms indicating the inflammation of the brain, or lungs, not without surprise that affections apparently much less severe than those he has been accustomed to see yield to his measures, should here resist them. This naturally induces him to increase their power, which, unfortu-

nately, generally makes a greater impression on the strength than on the disease.

The best chance of saving the patient under such circumstances, is correcting, as quickly as we can, the increased derangement of the digestive organs, which is supporting the new disease ; and it is of great consequence to effect this by means as little debilitating as possible. The debility previously induced on the nervous system in such cases, is always a principal source of the danger ; and it is impossible to restore its vigour while the causes which have impaired it continue. Thus it is, that inflammation of the brain in those who have suffered from long-protracted disorder of the digestive organs, so generally proves fatal ; and that the patient sometimes sinks without the usual forerunners of such a termination.

Both diseases prey on the source of nervous power, which is essential to life in every part of our frame ; and death often suddenly closes the scene, when a common observer can see no cause for the extreme loss of strength which the patient has evidently sustained. There are few cases in this coun-

try whose changes are so rapid, and which, after a certain period, become so unmanageable, as the combination we are here considering.

Physicians have always been too much inclined to regard the nervous system, as far as relates to the functions of life, merely as the organ of sensation; and this opinion has been greatly strengthened by the experiments of Haller, which proved that the heart, for a certain time, is capable of its functions, independently of that system; from which he and his followers inferred, that the nervous system has no direct power over the heart. But it appears, from experiments which the Royal Society did me the honour to publish many years ago, that although the power of the heart is not immediately dependent on the nervous system, that system is not only capable of directly influencing all its motions, but even of directly destroying the power on which they depend; and even this does not seem to be the most essential respect in which the life of the animal body is under the dominion of the nervous system; for it appears from other experiments, the accuracy of which is

now generally admitted *, that on the nervous power not only the function of many, but the structure of all the vital organs depends ; and that the ganglionic system of nerves, so far from being merely an organ of sensation, is itself as much a vital organ as the heart or lungs, and as essential to life, although not as immediately so.

To this powerful influence of the nervous system we must ascribe many of the phenomena observed in protracted cases of Indigestion, by which the functions of that system are impaired, and sometimes at length subdued ; and many of the phenomena which arise from a combination of Indigestion with other diseases. Can the influence of such a cause be confined to one class of diseases ? the attentive practitioner will observe it pervading every complaint of the dyspeptic ;

* Some account of these experiments has also appeared in the *Philosophical Transactions*, but their results are more particularly stated in the third edition of my *Inquiry into the Laws of the Vital Functions*. They explain an observation as old as Aretæus, respecting the case before us, that inflammation of the brain is apt to be accompanied by syncope, *φρενιτις γαρ ευτρεπτον ες συγκοπην κακον*. In the dyspeptic, for reasons just mentioned, this is most apt to happen.

and it is unsafe to disregard it in any of his more serious diseases. It is of the first importance, therefore, in all such cases as that we have been considering, to ascertain the state of the digestive organs.

The principal symptoms by which the presence of the affection of these organs is here ascertained, and its degree estimated, are nothing more than tenderness, and more or less fulness in the epigastric region, symptoms which will never be mentioned to the practitioner, and consequently will pass unnoticed if he does not inquire for them. I have in hundreds of instances, where serious disease was kept up by this cause alone, seen immediate and general relief obtained by relieving these symptoms, which may generally be done at little expense of strength; a relief which the most powerful measures had not previously been able to procure.

It may be said, perhaps, that it is difficult to suppose that an irritation, capable of so much mischief, should betray itself by so few symptoms, and those of so slight a nature; the reply is, that many of its other symptoms are mingled with, and consequently obscured by

those of the additional disease, and that the most severe irritation of the digestive organs often shows itself only by affections of distant parts, the head for example, or the chest. The obstinacy of the case before us is the effect, and therefore its symptoms are the symptoms of this irritation*. The fulness and tenderness of the epigastric region are only the means by which we ascertain the seat of the irritation; a point which, from the power of the sympathy of parts, it is often difficult to determine; and I can say, from very extensive experience, they are means that will seldom deceive us, if the examination be made in the way above pointed out.

Luckily, inflammation of the brain, or its membranes, is by no means a common disease, and therefore its concurrence with protracted Indigestion is rare; but the combination of the latter with inflammatory affec-

* How common, for example, is a severe fit of Indigestion, which betrays itself by no other symptom but headach? Could headach, so caused, be cured by means directed to the head alone? The same cause, which can produce the less serious affections in distant parts, can aggravate and prolong the most alarming.

tions of the chest, is among the cases of most frequent occurrence.

It is the duty of every practitioner to inquire into the previous state and habits of his patient ; and if he finds they have been those of the dyspeptic, he may suspect, in inflammatory affections of the head and chest, that the digestive organs partake of them, and be assured that, if such be the case, his means will very probably fail, if directed only to the part more prominently affected. Indeed, such is the sympathy of these organs with every other part, that it is a good, and it is surely a very easy, precaution to inquire into the state of them in all cases. This can never do harm, and much harm I have often witnessed from its having been neglected. It is the more necessary, because, even in cases where there has been no previous affection of them, the disease of other parts often spreads to them, which is particularly apt to happen in the case at present before us. Even in inflammation of the brain, induced by a blow on the head, it is by no means uncommon for that of the liver to accompany it, on the treatment of which the event

of the case, in a great measure, always depends.

There is something peculiar in the sympathy which exists between the brain and liver, as the fact just stated evinces, and which still more strikingly appears from the circumstance, that while, even in the most violent inflammation of the stomach and bowels, the head generally remains clear, (I have seen this disease prove fatal within twenty-four hours from the attack, the head remaining perfectly clear to the last,) delirium is a common symptom of inflamed liver. The same thing is conspicuous in the dejection which usually attends common bilious complaints; and the striking manner in which the secretion of bile is often influenced by affections of the mind.

The inflammatory affections of the chest in dyspeptics are still more apt to spread to the digestive organs than those of the head. It is but rarely indeed that they do not. When a dyspeptic is more or less suddenly attacked with difficulty of breathing, cough and fever, the region of the stomach towards the right side almost always becomes more

or less full and tender, and the treatment for inflammation of the lungs or their membranes, then gives only temporary or imperfect relief, if not combined with means directed to the digestive organs.

It is particularly deserving of notice, that general blood-letting, on which we here chiefly rely for relieving the affection of the lungs, usually makes little or no impression on that of these organs; and the continuance of the disease there, both renders the relief of the lungs imperfect, and disposes to a return of their inflammatory state. In these cases, it is essential to combine with the general blood-letting, abstraction of blood from the tender part, and a strict attention to the medicinal part of the treatment of the second stage of Indigestion. I can say, from a very great number of such cases, that by these means their treatment, which is usually tedious even where it is ultimately effectual, is rendered as uniformly manageable, and nearly as expeditious as that of ordinary cases of pulmonary inflammation; and is generally attended with less loss of strength, for the inflammation being

of a less active nature, less general blood-letting is required.

Did my limits permit, it would be easy to point out a similar connexion between affections of the digestive organs and a great variety of other diseases.

The variety of symptoms which present themselves in the various deviations from a state of health, is so great, that were they not divided into classes, and arranged under the heads of diseases, it would be almost impossible either to acquire or retain a knowledge of them; but diseases do not always appear, in actual practice, in the distinct forms in which they are set down in the works of systematic writers, who have not in general been sufficiently careful to point out the manner in which they are combined, and the means of cure, influenced by their combinations. More than half the cases we meet with are combinations of diseases rather than simple diseases.

THE END.



